AMENDMENTS TO THE CLAIMS

Please replace the claims with the following revised listing:

1. (Original) A computer having a housing defining an interior space and at least one heat-producing component installed inside the housing, comprising:

a heat exchanging device in heat exchangeably contact with the heat-producing component and having a passageway extending between an inlet port and an outlet port;

a heat dissipation device having a reservoir for storing a liquid coolant having an inlet opening and an outlet opening spaced a predetermined distance apart from the inlet opening, and a plurality of radiating fins installed on the outer surface of the reservoir so as to be capable of exchanging heat with the reservoir;

a first conduit extending between the outlet port of the heat exchanging device and the inlet opening of the reservoir;

a second conduit extending between the outlet opening of the reservoir and the inlet port of the heat exchanging device;

a pump for pumping the liquid coolant out of the reservoir through the outlet opening, through the second conduit, the passageway and the first conduit, and back into the reservoir through the inlet opening; and

a separating wall separating the heat dissipation device from the interior space to isolate the heat-producing component from the flow of ambient air.

2. (Original) The computer according to claim 1, wherein the housing is a tower case, and includes a subhousing mounted on the bottom wall thereof, the heat dissipation device being mounted inside the subhousing, the subhousing having an inlet vent and an outlet vent formed adjacent to the opposite ends of the heat dissipation device.

3. (Original) The computer according to claim 1, wherein the housing is a tower case, and wherein the separating wall is installed inside the tower case to be

spaced apart from one of the bottom wall and side wall of the tower case, the heat dissipation device is mounted between the separating wall and one of the bottom wall and the side walls of the tower case, and an inlet vent and an outlet vent are formed adjacent to the opposite ends of the heat dissipation device.

4. (Original) The computer according to claim 1, wherein the housing is a rack mounting case, and wherein an inlet vent and an outlet vent are formed at side walls of the case to be spaced apart from each other, and the opposite ends of the heat dissipation device are positioned adjacent to the inlet vent and the outlet vent.

5. (Original) The computer according to claim 1, further comprising a fan disposed adjacent to one end of the heat dissipation device and in communication with ambient air, for compelling the ambient air to flow through the radiating fins to exhaust the heat from the liquid coolant stored in the reservoir, the fan being isolated from the interior space by the separating wall.

6. (Original) The computer according to claim 1, wherein at least one divider wall extending one-end inner wall of the reservoir and the end thereof is spaced from the opposite inner wall of the reservoir is installed inside the reservoir to elongate the path of the flow of the liquid coolant.

7. (Original) The computer according to claim 1, wherein the heat-producing component is a power supply having a plurality of heat-producing elements, wherein the heat exchanging device includes a heat sink on which the heat-producing elements are installed and which has a channel provided at each side thereof, and a U-shaped conduit fitted into the channel to heat exchangeably contact with the heat sink and having opposite ends forming the inlet port and the outlet port, and wherein the passageway of the heat exchanging device is formed by the U-shaped conduit.

8. (Original) The computer according to claim 1, wherein the heat-producing component is a power supply having a plurality of heat-producing elements, and wherein the heat exchanging device includes a heat sink on which the heat-producing elements are mounted and which has the passageway through which the liquid coolant passes, being formed inside the heat sink, and a conduit fitted into the opposite ends of the passageway forming the inlet port and the outlet port.

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9. (Original) The computer according to claim 1, wherein the heat-producing component is a power supply having a plurality of heat-producing elements, wherein the heat exchanging device includes a hermetic container installed to surround the power supply and contains an insulating oil which is in direct contact with the power supply, and wherein the inlet port and the outlet port are formed at the side walls of the hermetic container and the insulating oil functions as the liquid coolant.

10. (Original) The computer according to claim 1, wherein the heat-producing component is a power supply having a plurality of heat-producing elements, wherein the heat exchanging device includes a hermetic container installed to surround the power supply and contains an insulating oil which is in direct contact with the power supply, a cooling plate being in heat exchangeably contact with the outer top surface of the hermetic container and having a U-shaped channel formed at one side being securely in contact with the hermetic container, and a U-shaped conduit fitted into the U-shaped channel, having a flat bottom so as to be securely in contact with the outer top surface of the hermetic container and having opposite ends forming the inlet port and the outlet port, and wherein the passageway of the heat exchanging device is formed by the U-shaped conduit.

11. (Original) The computer according to claim 1, wherein the heat-producing component is a hard drive, wherein the heat exchanging device includes a cooling plate heat-exchangeably contacting with the bottom surface of the hard drive

and having a pair of channels spaced apart from each other on one surface being securely in contact with the hard drive, and a U-shaped conduit fitted into the pair of channels, having a flat top surface so as to be securely in contact with the bottom surface of the hard drive and having opposite ends forming the inlet port and the outlet port, and wherein the passageway of the heat exchanging device is formed by the U-shaped conduit.

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12. (Original) The computer according to claim 1, wherein the heat-producing component is a swapping type hard drive replaceably mounted in a slot provided in the computer, wherein the heat exchanging device includes a heat collecting plate in heat exchangeably contact with the bottom surface of the hard drive, a cooling plate installed on the inner bottom of the slot, in heat exchangeably contact with the bottom surface of the heat collecting plate when the hard drive and the heat collecting plate are inserted into the slot and having a U-shaped channel on its bottom surface, a U-shaped conduit fitted into the U-shaped channel and having opposite ends forming the inlet port and the outlet port, and a plate spring having one end fixed installed on the slot, applying elasticity to the top surface of the hard drive to make the bottom surface of the heat collecting plate securely contact with the top surface of the cooling plate, and wherein the passageway of the heat exchanging device is formed by the U-shaped conduit.

13. (Original) The computer according to claim 1, wherein the heat-producing component is a central processing unit (CPU), and wherein the heat exchanging device includes a cooling plate having an inner surface on which the passageway is formed to be serpentine and an outer surface on which the inlet port and the outlet port protrude, and a bottom plate having one surface being in liquid tightly contact with the inner surface of the cooling plate and the other surface heat-exchangeably contacting with the surface of the CPU.

14. (Original) The computer according to claim 13, wherein a temperature sensor for controlling the temperature of the CPU is installed at one side of the

cooling plate and the speed of the fan is adjusted according to the temperature detected by the temperature sensor and when the temperature exceeds a predetermined temperature, the system is configured to stop operating to issue a warning message.

15. (Original) The computer according to claim 13, wherein the CPU is a socket type CPU connected with a CPU socket having projections provided on at least two facing lateral sides, and wherein the heat exchanging device further includes a securely contacting means having a crossed compression plate installed on the cooling plate and having two facing ends bent downward, a thread hole formed in the center thereof and locking openings locked with the projections formed at the bent ends, and a fastening thread for securely contacting the bottom plate with the surface of the CPU by pressing the top surface of the cooling plate, and a thread center maintaining groove for maintaining the center of the fastening thread is provided in the center on the cooling plate.

16. (Original) The computer according to claim 13, wherein the CPU is a slot type CPU having an outer plate on which a plurality of first throughholes, the surface of the CPU being the outer surface of the outer plate, and wherein the heat exchanging device further includes a securely contacting means having a compression plate installed to be securely contact with the top surface of the cooling plate and having an opening formed in the central portion of the compression plate to allow the compression plate not to be interfered by the inlet port and the outlet port of the cooling plate, and a plurality of second throughholes corresponding to the first throughholes, formed at the edges thereof, and fasteners inserted into the first and second throughholes to allow the compression plate to press the top surface of the cooling plate to thus securely contact the bottom plate with the surface of the CPU.

17. (Original) The computer according to claim 1, wherein the heat-producing component is a memory, wherein the heat exchanging device includes a

first cooling plate heat-exchangeably contacting with one side of the memory, a second cooling plate heat-exchangeably contacting with the other side of the memory, connecting projections provided on facing surfaces of the first and second cooling plates so as to be engaged with each other and having conduit insertion holes piercing lengthwise, a conduit having a long rod shape inserted through the conduit insertion holes in a state in which the first cooling plate and the second cooling plate are connected and having opposite ends forming the inlet port and the outlet port and a torsion spring interposed between the first cooling plate and the second cooling plate to apply elastic force such that the first and second cooling plates are brought securely into contact with both sides of the memory, and wherein the passageway of the heat exchanging device is formed by the rod-shaped conduit.

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18. (Original) The computer according to claim 1, wherein the pump is installed inside the reservoir, wherein an induction pump and a discharge pump are separately provided to allow a pumping operation even if malfunction occurs to either part, a safety valve for exhausting gas outside during dilation of the internal pressure of the reservoir and adjusting the pressure, is installed at an upper end of the reservoir, and coolant entrances which can be opened or closed by a screw or cork are formed at the topmost and lowermost ends of the passageway, so as to facilitate refilling or discharge of the liquid coolant.

19. (Original) The computer according to claim 1, wherein the housing is a tower case, the tower case having a heat dissipation device installed in the place of a conventional CD-ROM upward with respect to the tower case, and an upper housing having an air inlet opening and an air outlet opening to provide a separation wall.

20. (Original) The computer according to claim 19, wherein the upper housing includes each two pairs of air inlet openings and air outlet openings so that some of air passed through one air inlet opening is exhausted to the air outlet openings by the heat dissipation device, e.g., a Louver fin cooler, and the other of air

passed through the other air inlet opening is exhausted the air outlet openings through a power supply by the heat dissipation device.

21. (Original) The computer according to claim 19, wherein the fan has a separate controller to adjust the number of revolutions thereof into a quite mode, a medium mode and a max mode, the number of revolutions of the fan is adjusted manually according to user's switching or automatically according to the temperature set by a user, the controller detecting abnormality by means of a sensor, notifying a user of the abnormality through lighting or alarming, and automatically interrupting the operation of the computer in a predetermined time, e.g., in approximately 2 minutes if the user takes proper steps, in the event that cooling is not performed properly due to several causes in the cooling system, resulting in an abnormal increase in the temperature of the computer.

22. (Original) The computer according to claim 1, wherein the housing is a tower case, wherein a heat dissipation device is installed upright at one side wall of a tower case, an air inlet opening is formed at a position next to the lower side wall of the heat dissipation device, and an air outlet opening has a side housing having a separation wall so as to utilize the air outlet opening having a fan of the conventional power supply.

23. (Original) The computer according to claim 22, wherein the side housing includes an intermediate fan having a duct for forcibly inducing the air having passed through the air inlet opening to be guided to the power supply.

24. (Original) The computer according to claim 1, wherein the pump further includes an inverter having a converter for converting the conventional DC supplied from the power supply into an easily driven AC.

25. – 35. (Canceled)